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BULBS FOR POTS

AND FALL PLANTING IN THE GARDEN



A CATALOG OF THE BULBS AND PLANTS OF THE AMARYLLIS, IRIS,
ORCHID, GESNERIA AND OTHER PLANT FAMILIES
AND MANUAL OF THEIR CULTURE

AFRICAN VIOLETS

Many Reduced Prices. New Items Listed. Complete Culture Directions.
A Personal Letter,—to You.

FALL 1961

CECIL HOUDYSHE

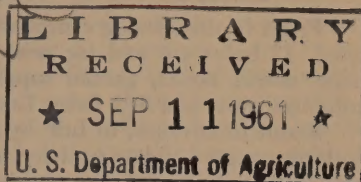
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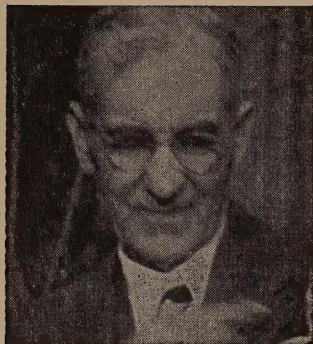
A PERSONAL LETTER — TO YOU

Dear Friends,

"Breathes there a man
With soul so dead
Who to himself hath not said
This is my own
My native land."

America has had first to gain its freedom from England, for only thirteen Colonies. Now we have fifty free states.

First we had to free the Negroes that were brought from Africa to act as slaves to those who would buy them. The war necessary was called the "Civil War," that was a war between the states. My own father was in that war and the North won.



Cecil Houdyshele

Now we are having troubles again but President Kennedy seems able to cope with them. The defeated candidates are giving him able assistance.

Longfellow wrote,

"Shoot if you must this old grey head
But spare my country's flag, she said"

It was a true incident; the remark of a very old woman.

Sincerely,

CECIL HOUDYSHEL

TERMS AND INSTRUCTIONS FOR ORDERING

Prices in this catalog cancel all former prices. They are for one bulb unless otherwise stated. 12 bulbs are sold for price of 10 or 6 for price of 5. 100 bulbs for price of 70 unless noted. Books, garden supplies and plants take no quantity discounts. California customers must add 4% Sales Tax.

Remit in advance, in full, by check or M.O. No C.O.D. No charge accounts carried. Nothing reserved unless paid for in full. These terms reduce our expenses and lower the costs to you. 1, 2 or 3 cent stamps are accepted for small sums—under \$1.00.

Insurance up to \$10.00, 10c. \$10.00 to \$50.00, 20c. Postal insurance covers all except freezing in transit. **Special Handling** costs 25c up to 2 lbs.; 2 to 10 lbs., 35c. **Special Delivery** is better as it also speeds delivery and is handled more carefully. We are not responsible if plants are not immediately taken indoors. Up to 2 lbs. costs 45c. 2 to 10 lbs., 55c. Over 10 lbs., 70c. Each fee is for one package only.

Wholesale. There are several items we can supply wholesale. Send your want list and we will quote our best quantity prices. We can quote African Violets. Dealers only.

Partial Shipments are made if bulbs are not all dormant at same time. We deliver everything within the season for correct planting. We must collect from you the fees for Insurance, Special Handling, Special Delivery.

We guarantee our bulbs to be true to name and healthy and replace them if not.

Postage rates. With postage so high we find we must ask for postage. If you want to enclose the carriage charges with your order you may add 10% of the order with minimum of 50c, in which case there will be no additional charges for postage, nor will there be any refund. This applies unless otherwise stated. If wanted by airmail it must be at your expense. Or we will send Express collect for carriage.

Catalogs. Spring Catalog mailed Jan. 1; Fall Catalog, Aug. 15, or soon after.

General Culture Directions

Rich sandy loam is the best soil. But if too sandy, it may lack fertility. It will require more rainfall or irrigation. The ideal garden soil will contain sand, clay and humus.

All soils require the addition of much humus. Compost all garbage, weeds, leaves, cut branches and manures. When rotted, add to soil and thoroly mix.

Fertilizer. We recommend only animal manures, compost and commercial fertilizers that are mostly of organic origin such as **Spoonit** and **Blue Whale**, listed in this catalog. In the outside garden fresh manure can be used on most plants that are growing vigorously as a very light mulch, but after flowering. Too much fertilizer before flowering may almost or wholly stop the flowers. When the growth of a plant becomes abnormally rapid it is unlikely to flower or produce fruits.

Do not fertilize a plant in dry soil, or use manure (unless thoroly rotted in a compost heap) in the soil before planting bulbs, seeds or plants. Water lawns, trees, and plants well the day before applying fertilizer and again a few days after application. Do not fertilize a sick plant in order to make it well. You are more likely to make it worse or even kill it. Small plants and seedlings should not have too much either. Lush, rapid growth may be weak and "flabby." Sturdy growth with firm structure is better. Little and often is the best rule for fertilizing.

Compare plants with people. Both are living, organic beings. Air, water and food are necessary for their growth and health. But one does not give babies beefsteak, fried potatoes, apple pie and a cup of coffee. Nor is this a good diet for an invalid or an ill person, however good it may be for one in vigorous health who performs hard physical labor. Nor should plants be over-fed or fed at all if sick of thirsty. But since one cannot add much rich food when potting a bulb, very good results may be obtained by a monthly feeding of very weak liquid manure, color or very weak tea. A more convenient way is to use Spoonit, which we list under Garden Supplies.

After blooming, many neglect their bulbs. As a result the bulbs do not flower the following year. For success one must continue to give good culture. This is the time to fertilize, irrigate and cultivate frequently, until yellowing foliage indicates the bulb is becoming dormant. During this growth period next year's flower buds are formed.

Depth of planting and distance apart often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. If left in one place a few years, most bulbs adjust themselves to their preferred depth. Approximately, bulbs should be about 2 or 3 times their diameter apart unless their habit of growth is spreading—like *Ranunculus*. In such cases plant farther apart. Bulbs as large as Daffodils may be 4" to 6" deep. Bulbs with a heavy erect stem need deep planting in order to remain erect. Plant deeper in light sandy soil than in heavy soils and in cold climates to protect them from frost. A winter mulch will help protect.

Pests. Snails, slugs, ants, mealy bugs, thrips, aphids, leaf hoppers, mites, red spider and scale are among the most serious pests in the garden or on house and greenhouse plants. They must be controlled. See our listing of **Insecticides** under **Garden Supplies**.

Acid and Alkaline Soils. Most plants thrive in mildly acid, neutral or mildly alkaline soils. But others do not have so wide a range of tolerance. Rhododendrons, Azaleas, Camellias, Gardenias, Zantedeschias, Caladiums (and other members of Arum family), Nerines, Haemanthus, Gloxinias, Begonias, Orchids and most shade loving plants require an acid soil. Some like *Gladiolus* prefer mildly acid to neutral soils; Bearded Iris do best in neutral to alkaline soils. The acid-alkali balance depends upon the concentration of

hydrogen ions in a saturated solution. This is expressed in pH units. pH7 is neutral. Below that the acidity increases: above it the alkalinity increases. For the mathematical, I will explain that the numeral is the negative logarithm denoting the concentration of hydrogen ions in gram atoms per liter.

In regions having heavy rainfall, excess alkali is usually dissolved and carried away by the runoff. Semi-arid regions usually have alkaline soils. Calif. soils usually have too much unless cover crops or applications of humus, which are acid, have lowered the pH. Some Texas soils are too alkaline. The remedy is obvious. Apply humus, ground phosphate rock, or small, even applications of sulphur. Improve the drainage.

Chlorosis of plants, indicated by lighter green streaks of foliage, may not be due to a virus disease, in all cases. It may indicate lack of all required nutrients, some of which cannot go into solution in an alkaline medium. Among such nutrients are Nitrogen and Iron which are soluble only in acids. Mild acidity is usually best. Iron Chelate in minute quantities often corrects chlorosis. Be careful. It burns if too strong. Iron Chelate is now added to Spoonit.

Potting Directions. Use clean pots of the right size, neither too large nor too small. A 2½" Amaryllis, for example, needs a 6" pot. A 1½" Eucharis needs a 5" pot. Small bulbs like Ranunculus or Achimenes may have 3 to 5 in a 5" or 6" pot. Cover the hole at bottom with a piece of broken pot, concave side down. Above this place a handful of sphagnum moss to prevent the soil from sifting into and clogging the drainage material.

The drainage must be perfect and it is essential that the soil above this drainage be of a friable texture that permits water to pass thru freely. Only sandy soil will answer this purpose. Add enough sand so that it feels very gritty. The potting soil we like best is about 2 parts of peat or leaf mould and 1 of sand. If peat is used a little woods earth or pure rotted leaves and twigs may be added. Plain dirt, especially if clay is present, or any mixture that becomes lumpy when dry is likely to produce poor results. Mulch surface with wet sphagnum to prevent erosion when watering and too rapid drying at surface. Special directions are given for certain plants with the listing.

GARDEN REFERENCE BOOKS

Bailey's Cyclopedia of Horticulture. This 3-vol. set of over 3,600 pages describes almost every cultivated plant and has a wealth of culture information. Price \$52.00.

Hortus Second (Bailey). A concise Dictionary of Gardening. This 778-page volume lists and describes nearly every plant offered in catalogs; and some that are not in the Cyclopedia of Hort. It contains a few culture hints. Price \$13.50.

Amaryllis and How to Grow Them, by Peggy Schulz. This book was written for amateurs and by a well known amateur. It contains much useful information. 128 pages, many line drawings, photographs and two colored plates. \$2.95.

Bulbs for Beauty by Charles H. Mueller. We find we have several of these. First printing. Copyright 1947. \$3.50.

Bulb Magic In Your Window. 100 bulbs to grow in your window, from Achimenes to Zephyranthes. 214 pages. 3 color plates and 42 full page illustrations. Complete growing instructions. \$3.95.

House Plants for Every Window, by Dorothy H. Jenkins and Helen Van Pelt Wilson. Formerly Enjoy Your House Plants. An up-to-the-minute revision of "the most popular book on house plants ever written." Covers many plants for the window garden. A must for the Window Gardener. \$3.50.

African Violets, Gloxinias, and their relatives. A guide to the cultivated Gesneriads by Harold E. Moore, Jr. 5 color plates and more than 40 line drawings, illustrating nearly every species described, have been expertly prepared by Marion Ruff Sheehan to help the grower identify his plants. Never before has this ornamental family been so completely and artistically depicted. \$10.00.

The New Greenhouse Gardening for Everyone, Ernest Chabot. Important factors are noted, including correct temperatures for forcing plants, bulbs, and orchids. \$4.75.

How to Grow Rare Greenhouse Plants. A new book on greenhouse gardening by Ernest Chabot. Complete directions for greenhouse culture of 260 rare plants. Everyone having a greenhouse should have both books. 182 pages. Illustrated. \$4.00.

Geraniums, Pelargoniums, by Helen Van Pelt Wilson. 248 pages, 7 color plates, many drawings and illustrations. Best book on this subject. \$4.50.

Gloxinias, and How to Grow Them, by Peggy Schulz. Illustrated by colored plates and line drawings. Many Gloxinia relatives discussed, 128 pages. \$3.50.

Growing Plants Under Artificial Lights, by Peggy Schulz. 146 pages. One color plate and many illustrations. \$3.75.

Tuberous Begonias, by Worth Brown. Mr. Brown is one of our most important hybridizers and wholesale growers. His book is a complete guide for the successful growing and propagation, outdoors or as house plants. 128 pages, illustrated. \$3.50.

The Complete Book of African Violets, by Helen Van Pelt Wilson. This is completely new and gives best information on hundreds of varieties. 29 Saintpaulias are shown in full color. 256 pages, fully illustrated. \$3.95.

How to Grow African Violets, by Carolyn Rector. 62 pages, paper-board covers. Illustrated. How to grow from seed, prepare potting soils, pollinate and hybridize, control pests, diseases, groom plants for show and grow from leaf cuttings. \$1.50.

The Little Bulbs, by Elizabeth Lawrence. Learn the charm of growing little bulbs. Miss Lawrence is a dedicated gardener. She won the Herbert Medal for her book "A Southern Garden" in 1943. \$4.00.

How to Grow Orchids, by Cecil Houdyshel. This booklet has recently been revised and is now 12 pages (formerly only 10 pages). Price 50c.

Amaryllis Manual, by Hamilton P. Traub. Dr. Traub, editor of Plant Life, has long been regarded as a world authority on the botany and cultivation of the Amaryllis. Culture, ornamental uses, and many forms of the species are treated in detail in this first complete and scientific work. Accompanying appendices provide the botanist with all the information he requires for a thorough knowledge of this important group of flowers. Illustrated. \$7.50.

Camellia Culture, edited by E. C. Tourje. A compendium of the latest scientific practices described from their own experience by 55 of the country's leading research workers lists and describes nearly every plant offered in catalogs, and some that are not in the Cyclopedia of Hort. It contains a few culture hints. Price \$13.50.

Garden Supplies

Postage Extra is necessary on several items below. The weight when packed is given on these items. It is clearly stated that you must send the postage when you order. Here is how to find it. We are very near Los Angeles. Call your P.O. and ask the cost of postage on the packed weight given from your P.O. to Los Angeles and send us that amount. Orchids that are shipped in pots or baskets are sent by express f.o.b. The minimum cost is \$2.36.

Spoonit is recommended for African Violets and all house plants or in the garden. Analysis: nitrogen, 18%; phosphoric acid, 20%; potash, 16%; chelated iron. To use, dissolve level tablespoonful in 1 gallon water or level teaspoonful in quart. Apply every 3 or 4 weeks. Transplants half strength. It never burns. **Prices:** 6 oz. package 60c plus 11c postage. 15 oz. pkg., \$1.25, plus postage on 1 lb. (See paragraph 1 above.) 2½ lb. pkg., \$2.50 plus postage on 3 lbs. Try the new **Orchid Spoonit**, 1 lb. \$1.25 plus postage on two lbs. **Spoonit** can be furnished in a 5 lb. drum for \$4.50, f.o.b.

Blue Whale. 12 oz. liquid Blue Whale, \$1.00 postpaid. Sea Rich, Blue Whale Peat Moss, Bantam bag (approximately 10 lbs.) \$3.25 prepaid. We have Blue Whale liquids in several sizes as well as the Peat Moss, at the nursery. No. 2 Bag of Blue Whale \$1.00 postpaid. Dealers contact for wholesale prices.

We recommend the use of both Blue Whale peat and the Liquid Fertilizer. Our potting mix is made up with ½ Compost, ¼ Blue Whale peat, ¼ washed sand, and enough Sponge Rok to give it good drainage.

Write to Lue Hale, The Friendly Gardener, Acme Peat Products of Canada, 687 No. 7 Road, Dept. E, Richmond, B. C., for the African Violet Flyer and for the Foliar Feeding Suggestions.

Flower Pot Tree Stand, black, sturdy, with saucers to hold 13 pots. \$8.75. **Table Model**, holds six pots. \$5.00. Brass, \$6.50. Please add \$1.25 for mailing and promise to send any difference if not enough. Black stand to hold 18 pots, \$12.50. Brass, \$14.75. f.o.b. by express.

Plastic Pots. Green. 2¼" starter pots 25c doz. \$2.00/100. 3", 50c doz. 100/\$4.00. New idea for pots. Square, with mesh bottom which will give very good drainage. 3" holds more soil than the above at 75c doz. \$5.00 per 100. 4" \$1.20 doz., \$9.00 per 100, plus postage.

Osmundine, best Florida grade, \$2.00 lb. postpaid.

N.P.I. A new planter mix. 150 cubic inches, 59c, postage for 2 lbs. 600 cubic inches, \$1.59, postage for 4 lbs. A Nutrilite product.

Sphagnum Moss. Best we can get. 70c per lb. gross weight. Postage extra, for 1 lb.

Plant Labels. The following are plastic labels, easily written upon with pencil. **Pot Labels**, length 4½", 35c doz. Length 3½", 30c doz. 100, \$1.00. Small labels for **African Violets**, 2" long, 20c doz. 75c for 100. **Orchid Labels**. Perforated on one end, but without wire or cord, 2½", 30c doz. **Aluminum Tree Labels**. Emboss name on label with sharp pencil or ball point pen. Two sheets of aluminum make this strong and permanent, with wire to tie on, 35c doz. Package of 50, \$1.00 prepaid.

Wire Baskets. Our wire baskets are electrically welded, galvanized, non-rusting. The best obtainable. They look better, last longer than painted, soldered baskets and cost but little more. Price, with hangers, 8", \$1.00 ea., \$11/doz. 10", \$1.25 each., \$13.50/doz. 16", \$2.75 ea., \$25.00/doz., postpaid.

Snap On Pot Hangers, for hanging any size pot. Galvanized. 35c ea. Send 10c ea. for postage. \$4.00/doz.

CATALOG ARRANGEMENT

is by Plant Families, according to their relationship.

In the following lists the **genus** (plu. genera) is mentioned first. After it, the species (plu. also species) or horticultural variety is named. The initial of the genus is used for the second and succeeding species. Thus A. will stand for Amaryllis or Agapanthus depending on the genus last named in full.

THE AMARYLLIS FAMILY — Amaryllidaceae

This Family includes the following bulbs, Agapanthus thru Zephyranthes.

Agapanthus, Blue Lily of the Nile. They flower here in June to Aug. In the north they must be grown in large pots or tubs and wintered in a frost free room. Plant in full sun exposure in any good sandy garden soil that drains well.

A. orientalis. Dark blue. Larger than longispathus. Superior clone. \$1.00.

A. orientalis. Sky Blue. 75c.

A. orientalis. Dwarf blue. \$1.25 each.

Amarcrinum Howardi. Bigeneric hybrid of Brunsvigia rosea and Crinum moorei. Beautiful, fragrant, pure pink fls. Fall bloomer. Culture like Crinums. Hardy to So. Indiana. Large bulbs. \$2.50 and \$1.25.

A. Dorothy Hannibal, a Les Hannibal origination. A new introduction. Like Crinum Cecil Houdyshel it flowers in all seasons. The flowers are a very pretty pink. New low price. \$4.00.

Amaryllis are the easiest, the most showy and popular of all bulbs for growing in pots. Equally desirable for southern gardens where they are hardy along the east coast to N. Car. and on the west to Vancouver. In the middle section they may be grown as far north as Ark. and Okla., but note special directions for colder sections.

How to Grow Amaryllis. In the garden, in the deep south where temperatures go

only a few degrees under freezing, Amaryllis bulbs need to be covered only about an inch or two. Farther north they may be planted deeper in protected places and mulched with straw, leaves and/or brush. In Okla., a customer reports a depth of 4" with mulch is safe. Try our "Hardy Hybrids." Amaryllis must not be planted close to trees, shrubs or large vigorous plants, whose roots compete and take the moisture. Irrigate frequently. Rain is seldom enough. The most common error is lack of sufficient moisture. They are endemic to the tropics and in many cases, where there is almost daily rain. The soil should contain much humus. Add well rotted manure and if not slightly acid, add some peat but do not acidify the soil with sulphur or aluminum sulphate. We do not advise planting imported, greenhouse grown bulbs in the outside garden. They seldom do well outside.

In Pots. A 2½" bulb requires a 6" pot. Give a 3" to 3½" bulb a 7" pot. Remove dead roots but every vestige of living root should be left on. Our best success in flowering Amaryllis and in growing them on to larger, better bulbs, is in a soil mixture composed of clean, sharp sand one part by volume and a mixture of pure organic material two or three parts. The latter may be pure peat or about half peat and half well broken up or decayed leaf mould, woods earth or completely reduced compost. The final mixture should have enough sand to feel very gritty. Such a mixture drains quickly but retains enough moisture around the roots.

To this mixture we add a tablespoon of bone meal and a level teaspoon of blood meal for each 6" pot. This is enough fertilizer until after bulbs have flowered.

The neck and about ½ of bulb should be above soil surface. This surface should be ½" below pot rim. In potting carefully spread out all living roots as they are a great advantage to bulbs. Such bulbs will start more quickly and may be given a warm temperature at once. If there are few or no living roots on bulbs, set them first in a cool place, about 50°, for roots to form and growth start.

We water at once and again when growth has started. With mixture above advised, one is not likely to over water tho you should be a little careful at first, if the bulb had no living roots. For as long as they will grow, potted Amaryllis need frequent watering. They are not only heavy drinkers but gross feeders. If you give liquid manure or Spoonit every 3 weeks, it will be about right. It is also good to vary the diet. Try Blue Whale.

Amaryllis like the sun. If the foliage fades the sun may be too strong or you may not be watering enough. In the house, give them a sunny window. Keep the bulbs growing vigorously until fall, Oct. or Nov. When outer leaves begin to go down, buds have been formed for next season's flowers and bulbs may be dried off and stored in a cool place. Inspect frequently. For early flowers, dry off about Nov. 1, or earlier.

A. bifida. Formerly known as *A. advena*. **Ox-blood Lily.** This is a fall bloomer. Hardy to So. Ind., Ill., Mo., Kansas, etc. There are 5 to 8 dark red fls. in an umbel. Not suitable for pots. Fall special, 35c ea. 3/\$1.00; \$3.50/doz. Smaller blooming size, \$12.50/100.

Amaryllis Hybrids. The H & S strain is considered to be the best American strain. **Assorted Colors.** 90c ea. 3/\$2.50. 6/\$4.75. 12/\$9.50.

Hardy Hybrids. These are not hardy outdoors in the colder states but as far north as North Carolina, Washington, D.C., and Oklahoma these have proven winter hardy if covered by 4" of soil and given a good winter mulch of straw. 75c ea., \$7.00/doz. Large, \$1.00; \$10/doz.

Dutch hybrid Amaryllis. We have the very best of the Van Meeuwen's Superiора named varieties for you this fall. The bulbs are large, give 3 stems as a rule, nearly all varieties bear 4 flowers on each stem. The wide flowers are flat. These lovely flowers smile at you in their full brightness while you look in their hearts. These are prepared Amaryllis to assure you early flowers. These are jumbo bulbs.

Albino. Pure white, a little green in the throat, large flat flowers. Very free flowering. This variety will please everybody who loves white Amaryllis.

Alcyone. Dark violet-red, very free flowering. Crinkled petaloid ears twist together. Without any doubt this variety is the very best in the deep dark red color.

Charlemagne. Purplish red, very large flowers. A real giant.

Giant Goliath. Deep vermilion, enormous flat faced and star shaped flowers, mostly 3 flower stems bearing 4 flowers each. This variety has an amazing ability to reflect light, resulting in a glossy bright sheen. Like Hollywood's term "Super-colossal." This variety caused a traffic mass at the Keukenhof Exhibition, 1958.

Hellas. Light brick red with large white center. Broad white stripe on each petal, giving the impression of a red star with white center. Very free flowering, 4 to 6 blooms per stem.

Queen of the Pinks. Beautiful soft Camellia pink, very free flowering. Produces 2 to 3 stems bearing 4 perfectly shaped flowers each. This variety is without any doubt one of the best pink varieties available at the present time.

Queen Superior. Excellent dark red. Large flat flowers, very free flowering, growing more beautiful each year. No Amaryllis collection is complete without this lovely variety. One of the best.

Zenith. One of the best novelties. The 3 lower petals are white, the 3 upper petals are deep rose from the edge down going over into the white center. Large flowers, always 4 per stem. Excellent keeping flowers. A splendid variety.

Price \$7.50 each. Eight, value \$60.00 for \$54.00.

Dutch Hybrid Amaryllis. Same large bulbs specially prepared by color only. White, Dark Red, Pink, Orange, Variegated. \$4.50 each. One each of the five colors value \$22.50 for \$21.50. These and the above named varieties will be delivered late October for early flowering.

Dutch Hybrid Amaryllis, lost labels, as well as some named sorts for \$3.75 each our selection. These are all good varieties but in too small numbers to list separately.

Amaryllis gracilis. This is a new strain of hybrids. These are smaller plants and flowers. \$5.50.

A. striata var. fulgida. Species. Exquisite star shaped flowers. Peach red with chartreuse star center. The bulbs are naturally small. \$5.00. We have small bulbs from seed, probably two years old for \$2.00.

A. Lady Grant. Species. This was brought to California from India in late '20s. Broad leaf, white rib through center of leaf. Only a very few of these. Bulb rather small, may not flower first year. \$10.00.

A. immaculata. Species. Usually known as *A. candida*. The long, tubular, lily-shaped flowers are pure white. Deliciously fragrant. \$5.00.

Clivias have evergreen, strap-like foliage somewhat resembling that of Amaryllis. The orange flowers are produced in umbels of 10 to 25 in March and April.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced $\frac{1}{2}$ " apart, and in garden under Avocado (evergreen) trees, directly in the soil as they are often grown in Calif. When grown thus they will make very large clumps. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well watered after flowering, all summer and fall. Liquid fertilizer occasionally helps. When growth ceases in late fall rest them by giving them less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperatures from above 32° to not much over 50°. Pots should be 6" to 8" for small plants and up to 12" for larger. As they grow and increase, do not divide but shift to larger pots. Drainage must be perfect. Potting soil as described under "General Culture Directions." pH 7 is about right. One cannot guarantee a Clivia to flower the first year after moving tho they usually do.

The foliage of our Clivias, grown outside in the ground will not be as perfect as that of pot grown plants. But when potted, they replace the old foliage in a few months and become specimen plants.

Clivia miniata. Wide open soft yellow orange fls. \$1.00, \$2.00 and \$2.75. Only the \$2.75 is likely to flower.

C. cyrtanthiflora. The flowers are tubular and long, yet they are so numerous that they fill a large umbel and make a beautiful floral display. They are distinctly different from other *Clivias* also in their time of flowering. There is not a month in the year when we do not sometimes have flowers. Price \$10.00.

C. European Hybrids. The large flowers have well rounded petals of red-orange and the wide leaves are ornamental. This is the most desirable of all *Clivias*. Selected fine large plants, blooming size, \$6.50.

Crinum. *Crinum Cecil Houdyshel.* \$1.00. Jumbo \$3.00. *Crinums* are available at any time for southern states or if wanted for pots. See Spring catalog.

Daffodils and *Narcissus* belong to the genus *Narcissus* of the *Amaryllis* Family. We have some of the best for you this year. **Culture.** Daffodils are hardy both in the mild climate of the south as well as in the colder northern states. In the north especially it is best to plant the bulbs rather deep where the frost does not reach. Six inches is about right. Sandy loam is the best soil, but any good rich garden soil will do. They will do fine in partial shade of trees altho many are grown in full sun.

Daffodil Dick Wellband. Pure white with flame cup. Vigorous grower. 30c ea. \$3.00 doz.

D. Diotima. Huge golden yellow. Largest daffodil there is. 35c ea. \$3.30 doz.

D. Mount Hood. Huge pure white, wide ruffled cup. 45c ea. \$4.50 doz.

D. Pink Supreme. White petals with rich pink cup. One of the best pinks. 40c each. \$3.60 doz.

D. Thalia. Cluster of 2 or 3 pure white flowers on each stem. 30c ea. \$3.00 doz.

D. Twink. Double. Petals soft primrose. Clear orange center. 30c ea. \$3.00 doz. 3 each of above (18 bulbs), \$5.15.

Habranthus bloom several times a year and at most any time. Culture like *Amaryllis*. After good growth, if allowed to get rather dry for a period they will usually flower after a good watering. Umbels have but one flower. **H. robustus**, pink lavender, 50c ea., \$4.00 per doz.

Haemanthus. The Blood Lilies of South Africa. So rare that few have seen them.

Culture. Hardy only in almost frost free climate like So. Calif. or Fla., if temperatures do not go below 24° at night. They do well in pots anywhere. The soil should be as for *Amaryllis*. They should have about half sun exposure. Pot with bulb only lightly covered.

H. coccineus. The true Blood Lily, altho all *Haemanthus* are known as Blood Lilies. The umbel of scarlet or blood-red flowers comes in late Aug. to Sept., after a 3 months dormancy. Two long semi-erect leaves follow the flowers and remain green thru the winter and early spring. The scape is attractively marked by red spots on a bright background. Flowering sizes, \$2.00 and \$3.00. Extra large, that should give two scapes, \$4.00.

H. Natalensis. A very rare bulb. They may be flowered in house or greenhouse or outside garden if weather is warm. Flowers from January to March depending on when started in to growth. We have only a very few of these bulbs at \$7.00 each.

H. multiflorus. In general appearance, it resembles *Katherinae*. Stem heavily spotted brown. This species is ideal for pots as it is more tropical and more tender. Blooms earlier. Flowers are described by botanists as blood-red but you may disagree. Blooming size. \$5.00.

We ship *H. Katherinae* and *H. multiflorus* as soon as safe to mail.

Hemerocallis. Daylily. Our selection, 10 for \$5.00, labelled, or \$3.00 per doz, assorted. 34 varieties as listed in spring catalog 1960, labelled for \$24.75. If by express collect we will send larger clumps.

Lycoris. Oriental Spider Lilies are natives of Japan and China. The entrancing beauty of their flowers makes them the most popular of garden bulbs in the south and very desirable pot bulbs in the colder sections. The most tender is *L. aurea*. It is hardy only in the deep south. All the others are hardy up to Va., Ky., Okla., etc. They prefer sandy fertile soil with peat or leaf mould added, plentiful watering from mid-July.

Lycoris albiflora. Large white fls. with color markings. Almost hardy. \$1.00. 12/\$10.75.

L. aurea. Golden Spider Lily. One of the most beautiful of all bulbs. Not hardy except in deep south. 50c ea. 3/\$1.45. 12/\$5.00. Special low price.

L. radiata. Red Spider Lily. Hardest of these listed above. Hardy to So. Kans. Deep coral red. 25c. 5/\$1. \$2.35 per doz.

Nerine. This genus includes some of the most beautiful of flowering bulbs. They bloom in succession from about Aug. to Jan. Hardy only where temperatures seldom go lower than 26°, but they are fine pot bulbs. **Culture.** Pot or plant in acid, sandy soil. Add peat or leaf mould. Pot at once with bulb covered and a little deeper in garden, in full sun. When foliage yellows, withhold water. Keep as near dry as possible when dormant. There is only one reason why you do not all buy Nerines. You do not know their beauty and ease of culture.

Nerine Bowdenii. 10 or more fine pink flowers in an umbel 9" wide on a 15" scape. One of the finest Nerines and very easy. 50c.

N. Bowdenii, var. Pink Beauty. Has larger, finer flowers and flowers much later, usually in late Dec. or early Jan. Multiplies rapidly yet we can seldom have enough stock to list. \$2.00 each.

N. Bowdenii, var. Magnifice, very fine improved Bowdenii, similar to Pink Beauty but flowers earlier. Extra special price, \$1.00 ea.

Pancratium maritimum. Very fragrant white flowers, in shape like an Ismene but pure snow white. **Culture.** Simple. Plant them 4" deep and watch them grow. Hardy in middle south. 50c ea. 3/\$1.25.

Sprekelia formosissima superba. Orchid amaryllis. Deep crimson flowers in orchid-like form. Much larger than common type, better color, more flowers. Evergreen. Fine in pots. Culture like Amaryllis. 50c ea. 3/\$1.25. \$4.50 per doz.

Tulbaghia violaceae. Mauve flowers produced thruout the year, a true ever-bloomer. Foliage has garlic odor if bruised. An acquisition for pot culture. 25c ea. \$2.00 per doz.

T. cepaceae. Superior clone buds are a deeper color than violaceae and flowers more freely. 35c ea. \$3.00 doz.

T. fragrans. This species has a large, true bulb, with glaucous green foliage, 18" long and 1" wide. It has no allium odor. The plant is a profuse winter bloomer in a cool room with a few flowers in summer. It has larger fragrant flowers than violaceae. Evergreen. Special price. \$1.00, 3 for \$2.50.

Vallota purpurea. Scarborough Lily. Large funnel shaped, scarlet flowers in late fall. Slightly difficult for inexperienced gardeners but very desirable. Grow in pots same soil as for Amaryllis with bone meal added, and top of bulb covered by 1" of compost. We can't guarantee our bulbs to flower this fall or at any time. Suggest you feed them with Spoonit or other liquid fertilizer. They are evergreen and must not completely dry off in winter. House or greenhouse culture is advised. They are a challenge to your gardening ability. Price \$5.00.

Zephyranthes. Fairy lilies. The smallest Amaryllid, 6"-12" tall. Fine in beds or borders. Hardy in middle south. In north, dig and store. They may be grown in pots. Give acid soil, sandy loam with leaf mould or peat. Full sun or slight shade.

Z. candida. Pure white, evergreen. The masses of white flowers in late summer make them outstanding in a bed or edging for border. Half hardy and easy in pots. 2 for 25c. \$1.00 per doz. 100, \$5.00.

Z. grandiflora. The largest Zephyranthes and the best pink. It is very easy to grow. In the south, its habit of flowering every time it rains in summer gives it the name of Pink Rain Lilly. 3/45c, 12, \$1.75.

Z. sulphurea. Deep yellow. 20c ea. \$2.00 doz.

The Alliac, or Onions, are now classed in Amaryllidaceae. The following are ornamental and useful for seasoning salads, soups or meats.

Allium Giganteum. 4 ft. tall, lvs., two inches wide. Flowers bright lilac, in dense globose umbels 4 inches across. \$2.85 each.

A. karataviense. Purple, with broad leaves. 15c ea. \$1.50 doz.

A. neapolitanum grandiflorum, twenty to thirty dainty white flowers on tall stiff stem. Fine for forcing. 3/15c. 50c doz.

A. ostrowskianum. Deep carmine rose. Dwarf. 10c ea. 65c doz.

A. tuberosum. Japanese Garlic. Deliciously flavored leaves. Evergreen and probably not hardy in north. Sm. 2 for 25c. Large 25c ea.

IRIS FAMILY — Iridaceae

The Iris is the type genus of this family. Bearded Iris and Gladiolus are the outstanding members. Maricas are lovely and curious house plants, truly "out of the ordinary."

Tall Bearded Iris. No garden is complete without Bearded Iris. **Special Offer**. If you do not care for names, we offer surplus rhizomes, 20 to 30 var., no labels, 100 for \$8.00, f.o.b. express. If by mail, send postage for 12 lbs. **Collection** of 10 fine varieties, labelled, our selection, \$2.50. 20 varieties, labelled, \$4.50.

Iris reticulata. This, smallest of bulbous Iris, is most useful for potting. Fragrant, violet blue flowers in January to February. Four bulbs in a 5" pot. Give a sunny window in a cool room. Hardy in south and in north if well protected. 25c ea. or 4 for 80c.

I. Spuria. Assorted colors in mixtures only, blue, bronze, yellow. 35c ea. 3/\$1.00. \$3.00 doz.

Dutch Iris

Dutch Iris are a must for the spring border. These are bulbous Iris. The flowers are not fragile like Bearded Iris and are therefore useful for cutting.

Culture. Plant in the fall before November if possible. Plant 1 to 3" apart and 3 to 4" deep depending on size of bulbs. They are hardy in milder sections of north but a mulch is advisable. Full sun or slight shade. New best varieties.

Blue Ribbon. New large intense Royal blue. **Blue Champion**. Large flowering. Light Blue. **Bronze Beauty**. Bronze falls and royal blue standards. **Gold and Silver**. Pure white with golden falls. **Golden Harvest**. Popular golden yellow. **King Mauve**. Beautiful orchid mauve color. **Le Mogol**. New tall bronze. **Sunshine**. New outstanding rich canary yellow. **White Pearl**. Huge pure white. These are the largest size. \$1.25 doz. 8 doz. \$8.00. 100, \$9.00.

Freesias

Freesias are exquisite in beauty but their delicious fragrance is an appeal even stronger. Where they can be grown in the garden they are indispensable. They are easy forcers in pots and equally valuable for the window garden.

Culture. They are hardy only in the warmer sections of the south. Plant outdoors early before November if possible. Plant our large bulbs 2" or 3" apart and 3" deep in the garden.

Freesia Tecolote Marie. Largest, earliest and most beautiful of all white Freesias.

Freesia Tecolote Hybrids. Flowers of immense size, wide open and delightfully fragrant. Plants of unusual strength and vigor. Tall strong stems. Much finer than the standard commercial varieties. We offer them in mixture and Marie, white, at 75c per doz., 50 for \$3.50, 100 for \$6.25.

Crocus species. Spring flowering. **Culture**. Plant 3-4" deep in good well-drained soil. As new corms form on top of the old ones and so push the plants out of the soil, it is well to replant every few years. They are of simple culture and popular. **Crocus Ancyrensis** (Golden Bunch), orange yellow. **C. Haarlem Gem**. Light bluish violet. **C. Whitewell Purple**. Purple. **C. Zwanenburg Bronze**. Bronze. **C. Chrysanthus E. P. Bowles**. Yellow, outside purple. 3/30c. 95c doz., 100 assorted \$7.00.

The Gladiolus listed below will be ready in November. Spring catalog out January 1962 for larger list of varieties.

New All American Gladiolus. Every garden should have these new Glads as well as the older varieties. Three new 1962 introductions.

Ben Hur. 1962. Ruffled Rose pink.

China Blue. 1961. Soft blue deeper at tips, lighter in throat.

Gypsy Dancer. 1961. Vivid fiery orange with yellow on lower petals.

Horizon. Rose lavender. 1962.

Rusty. 1961. Giant smokey-bright red mark on lip silver picotee.

Thunderbird. 1962. Ruffled fiery deep persimmon.

Prices. No. 1 bulbs. 35c ea. 3 for \$1.00. 12 bulbs for \$3.65.

K and M Butterfly Gladiolus. New. Small dainty ruffled flowers. Very popular for picking for the house.

Elf. Apricot, scarlet throat on yellow blotch, frilled.

Melodie. Salmon pink with orange scarlet blotches.

Rendezvous. Clear orange scarlet.

Summer Fairy. Reddish salmon, reddish maroon throat.

Topolino. Golden yellow, scarlet throat.

Walt Disney. Primrose with large scarlet blotch.

Prices. No. 1 bulbs. 2 for 30c. 6 for 80c. 12 for \$1.50.

Gladiolus. Miniatures like a miniature carving, a cameo or fine lace, they are dainty, beautiful and alluring. Fine for cut flowers. Assorted. \$1.00 doz. 100 for \$10.00.

Butterfly, All American and other Glads will be listed in spring catalog.

Tristis concolor. Evening Flower. The fragrant glad. Sweet, spicy fragrance in the evening. Creamy white. 15 to 18 inches tall with three to five flowers on each stem. Where climate permits they should be left undisturbed for several years. To be effective they should be planted in clumps. 3 for 65c. \$2.00 per doz.

Neomarica or Walking Iris are tropical and are favorite house plants for their unusual habit of growth.

Neomarica gracilis. Smallest and earliest. Use 5" pot. 75c.

N. Northiana. Larger plant and flowers, slow propagator. Use 6" pot. \$1.75.

N. hybrids. We crossed the above species and raised plants with flowers as large as Northiana, as profuse as gracilis and plants midway in size. They are rapid multipliers. \$1.75. All 3 kinds for \$3.75.

Sparaxis. Richly colored fls., on plants about the size of Freesias. Mostly red shades. No perfume. Easier to flower in pots than Freesias and hardier outside in south. Large. 3/20c. 65c doz.

LILY FAMILY — Liliaceae

Lilium. This genus includes all true lilies, altho Gloriosas are so close that the flowers are similar in form. **Culture.** Plant 4" to 6" deep (deeper probably in north) in mildly acid humus—leaf mould, peat. Planted among low shrubs, where tops may reach up into the sunlight, with their feet cool and their heads warm, they are ideally situated. They do well in the half shade of trees or a lath house. All can be grown in pots, but after flowering must be shifted to garden.

Lilium auratum platyphyllum. Gold Band Lily. The exotic flower is a native of Japan. Considered the world's most beautiful lily. Richly fragrant. \$1.25 ea. 3/\$3.50.

L. Croft. It makes a shorter stem and a more spreading flower head and thus more attractive in pots than some lilies used for Easter. Fine for southern gardens. Price. 60c each. 3/\$1.60.

L. Golden Clarion. The golden and lemon-yellow trumpet lily. They are dependable, sturdy, vigorous and prolific garden plants that should thrive wherever a Regal Lily can be grown. 5 to 7' tall when well grown. \$1.10 ea. 3/\$3.00.

L. Red Champion. A strain of the species *L. speciosum*. A grand lily for garden decoration, cut flower or pot culture in a cool greenhouse, uniform, disease free and vigorous. A well-drained soil where it can receive light shade during the hottest part of the day is the main requirement for successful culture. Price. 75c ea. 3/\$2.00.

Brodiaea uniflora. Lovely porcelain blue flowers on a low plant. Usually grown in pots in north but a customer reported them hardy in Ohio. 6 bulbs in a 4" pot will go well with Oxalis in your kitchen window garden. Must have a cool room. Outside in southern gardens. 3/15c. 50c doz.

Lachenalia aurea. Beautiful golden yellow pendulous flowers. They are ideal bulbs for pots, blooming earlier than most any bulb. Culture similar to freesias. 3 for 45c, 6 for 90c, \$1.75 doz.

Leucocoryne ixiodes odorata. (Glory of the Sun.) Large, fragrant, blue flowers in spring. Culture like freesias. Plant 4 inches deep. The exquisite flowers last a long time when cut. 3 for 50c, \$1.85 per doz.

Ornithogalum arabicum. (Star of Bethlehem.) The showiest species. White with glossy black eye. Easy in pots. 3 for 40c, \$1.50 doz.

Dutch Hyacinths are universally admired by all flower lovers. Their exquisite beauty, rare fragrance and easy culture contribute to their popularity.

Culture. The preferred soil is good sandy loam. Heavier soils that have been made lighter by the addition of humus will do very well. In the south they need to be covered only 2" or 3". In the north plant a little deeper and give enough mulch to protect them. Plant from Oct. to Dec. Early is best. Largest size. **Hyacinth Bismark.** Bright blue. Early forcer. **Jan Bos.** Carmine red. Very early. **Lady Derby.** Soft clear pink. Medium early. **L'Innocence.** Pure white. Early forcer. 45c each. \$1.75 for one each. \$4.85 doz. **Hyacinth Glasses** to grow them in \$1.00 each.

Roman Hyacinths. Have single flowers, a less dense raceme than the Dutch Hyacinths but they have equal fragrance and great beauty, in the garden or in pots. **Culture.** Plant 3" to 4" deep in rich sandy loam containing much humus. Assorted colors. 3/75c. \$2.75 doz.

Muscari. Grape-Hyacinth. Spring flowering. Of easy culture, as for Hyacinths. **Muscari Armeniacum,** bright blue, splendid for forcing, as well as outside. **M. Botryoides Album,** white. 3/15c. 50c doz.

Scillas are closely related to Hyacinths. All are hardy except *S. peruviana* and it has been grown in gardens in Brooklyn on L.I.

Scilla Campanulata alba Maxima, pure white. **S. Excelsior,** blue, extra large. **S. Queen of the Pinks.** Deep pink, large. 3/30c. 85c doz.

S. hyacinthoides. One of the finest bulbs for the outside garden as it is perfectly winter hardy in north. It has a densely flowered raceme often 3 ft. or more in height. Ideal for the perennial border just the blue you want. Plant in full sun. If early planted in the south it will flower in late winter to spring. In the north about mid-summer. Flowers are very useful for cutting. The bulb is extremely hardy and a strong grower. Take my advice, plant it. 25c ea. \$2.35/doz.

Scilla peruviana is an ideal bulb for pots or garden. It is hardy to N. Car. and in Long Island. As a house plant it does well in cool but sunny rooms. Give full sun outdoors. Winter bloomer. The short foliage is nice and flower head is oval and on a short stem. Blue fls. Sometimes a White. Blooming size, 50c. 3/\$1.25. Special \$4.50/doz.

Veltheimia viridifolia. This is one of the most beautiful plants one can grow in a pot. The glossy vivid green leaves are wavy margined and form a perfect rosette much like a bird's nest fern. From the center arises a scape with tubular, drooping flowers closely spaced. The color is a deep rosy or purplish pink of an ineffable tone not found in any other flower. If planted early in Southern gardens or in pots it should flower as early as Dec. 15 and continue for nearly 3 months.

Culture is very easy. Use a sandy or sandy loam soil to which is added fine screened peat or leaf mould about one-third or fourth. Some charcoal is good. Read general potting directions. Price \$1.25 each. 3/\$3.35.

OXALIS FAMILY — Oxalidaceae

There are three types, Winter growing, Summer growing and Evergreen. The following are winter growing and blooming or evergreen. Oxalis are the brightest and most vivid of winter flowers for a sunny window or in outside beds in the deep south, where temperatures do not go much below about 26°. They give a profusion of bloom over several months time. They need a cool room.

Culture. Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little

deeper. In pots, the smaller may go 6 in a 5" pot. They need full sun exposure and do best in a very sandy soil, rich or poor. Flowers close at night and on dark days. Tuberous rooted species start very slowly. Keep them moist and be patient.

Oxalis adenophylla, lilac rose. 15c ea. \$1.50 doz. Is fine for gardens and borders.

O. Bowiei. A large plant with bright rose red flowers. 3 bulbs to a 5" pot 5c ea. 50c/doz. \$3.75/100.

O. cernua. Bermuda Buttercup. Deep golden yellow flowers. Very profuse. 5c ea. 50c/doz. \$2.50/100.

O. crassipes. Flowers bright rose. Evergreen and everblooming increases by tubers and can be moved at any time. Plant at once. Large tubers 15c ea. \$1.00/doz.

O. crassipes alba. A pure white form. Very pretty. 25c ea. 6/\$1.00.

O. Deppei, deep pink, are special for growing in pots. 3/15c. 50c doz.

O. Grand Duchess. Low growing plants, but give a profusion of very large flowers in two colors. **Lavender, Pink, and White**, 5c ea. 50c/doz. \$3.50/100.

O. hirta. This rare and unusual oxalis makes a semi-erect leafy stem about 8" long. The violet flowers are borne in the axils of the leaves. 2/25c. 12/\$1.00.

Oxalis martiana aureo-reticulata. This is a beauty. Variegated leaves, flowers lavender. 75c ea.

Oxalis Special. The bulbs offered in this lot are assorted in size and color. They will all flower well. Some are accidentally mixed, others are surplus. Price, 25 for \$1.00.

THE CALLA LILY FAMILY — Araceae

This family contains the so-called Calla Lilies or Zantedeschia, Black Callas and other Aroids.

Culture. All Zantedeschias, *Arum palaestinum* and other aroids listed here are desirable for pot culture. *A. palaestinum* will start about Sept. or later. Do not put this bulb into moist soil before that or it will rot. Zantedeschias—pink and yellow—may be potted by about Dec. 15. Don't rush them, as too much water before they start to grow may rot them. It is really better to start in early spring, here in late February. All do well in the garden in a moist semi-shaded cool place. They are not hardy in cold climates; dig in fall. The White Calla usually blooms in California in the garden in late winter. They may be planted in early fall in pots or garden. All do best in mildly acid soils, on sandy side. For acidity add peat. Most Aroids are shade plants.

It is an error to keep large White Callas growing continuously. If rested thru summer you will be rewarded with flowers. Callas as pot plants need some sun, enough to prevent spindly growth, plenty of light and like all plants, good ventilation. They need abundant water but good drainage.

Zantedeschia aethiopica. Well known **White Calla**. They can be potted anytime between Sept. 1 and Jan. 1. Even later if available. Water once when potted to settle soil. Then keep soil barely moist until growth is well started. When growing well they need plenty of water and perfect drainage, give about half shade. They are hardy outdoors down to 15° but tops may be cut down by frost at about 20°. Blooming size, 25c. Large 50c. Small offsets for foliage only, 15c.

Z. rehmanni elegans. Light pink Calla. Easier to grow and flower than the dark pink. A few are very light, almost white when forced but darker in the garden, and always beautiful. Large bulbs, 40c. 3 for \$1.15. Delivery Nov. on all Zantedeschias.

Z. elliotiana. Deep Golden Yellow Calla. Like all the callas, they need some sun. If they do not have it they grow too tall and weak and may fail to flower. Half sun is usually right. Delivery Nov. 40c ea. 3 for \$1.00.

Arum palaestinum. Black Calla. Solomon's Lily. Foliage and flowers are shaped like Callas but flowers are black and odorless. Plant 4" deep in garden, not so deep in a pot. Begin to water about Sept. 1. Flowers in Feb. Large for 50c and \$1.00 ea.

Helicodiceros muscivorus. Twist arum. A curiosity. Blow flies like its "fragrance." The flower spathe is contracted in the middle and bends at a right angle and opens in

an 8" or wider flower. Pale purple, covered by long white hairs. the tube spotted. Summer flowering. Hardy in deep south. We have very few tubers and must price all sizes at \$2.50.

Begonias. See spring catalog out early January. Tuberous rooted etc.

THE ORCHID FAMILY — Orchidaceae

The ideal place for an amateur to grow orchids is in a hobby greenhouse.

Our 12 page booklet How to Grow Orchids is now 50c per copy, postpaid.

Culture of Cattleyas. By far the most desirable of orchids. Many amateurs are having success in growing and flowering this most beautiful flower. Briefly you must have a greenhouse, a room or a glassed in porch where the plants will have good, strong light but no direct sun, unless a little in very early A.M. or late P.M. Greenhouse glass must be shaded by a coat of white wash or shading compound. In the home, shading may be had by using muslin curtains. If the foliage becomes very light green or yellowish the light is too strong; if a deep rich green, the shade is too much. 65° to 80° is close to the best temperature range. Note the temperature, light exposure and humidity favorable to African Violets. The same is about right for Cattleyas. You can grow them side by side. But watering is different.

We spray the foliage of Cattleyas at least once a day in summer and if hot often twice. This cools them. Do this about noon, earlier if temperature becomes too high. Do not spray in late P.M. as foliage should become dry before night. When cool weather arrives we spray less often, much less often in winter. Once or twice a week may be enough or even too much, if you do not properly heat for their comfort. A little water held around the base of a bud spathe may cause it to blacken and rot off. Over watering Cattleyas is the most common error. We do not usually pot water oftener than once a week and often spraying is enough if some falls on the osmunda. You must study your plants and note their reactions. Success will reward you.

Cattleyas. We offer blooming size plants for \$5.00. These are in 4" or 5" pots. As-sorted species and hybrids.

C. Genevieve Toy. (C. Cordary x C. Ardentissima.) Flowers very dark and beautiful. Spring. 5" \$15.00.

C. Remy Chollot. Medium lavender color. \$10.00.

C. Enid. Very large, rose purple flowers in winter and some flowers can be cut throughout the year. \$10.00.

C. Mt. Royal. \$7.50.

We have Cattleyas in too small lots to list and some with lost labels that we can let you have for \$5.00 each.

If wanted in pots they must go by express collect, out of pots with enough potting material, by Parcel Post.

Brassavola culture. They may be grown in any media used for growing orchids. They may be grown in lath house or under trees in Southern California.

Brassavola glauca. Large white flower, slightly fragrant, often tinted with green, lip white sparsely marked with pink and purple or entirely white. In 8" basket, \$10.00 by express. Loose, with material to pot, by Parcel Post.

Brassavola Digbyana. Plant resembles a Laelia. The white flowers have a fringed lip. We grow in baskets. Price \$10.00, in 8" wire basket, f.o.b. express. Out of basket with enough potting material, by Parcel Post.

Oncidium cebolleta. Rush-like leaves of bronzy color, 8 inches long crowded together. The flower stem is well branched and carries dozens of small yellow and brown flowers. \$5.00 ea.

Cypripediums may be grown in "cool house." We grow them in our orchid house which also has Cattleyas and other plants. They will grow and flower in your window garden.

Cypripedium callosum. In shape, similar to our native Lady Slippers and closely related. Correct botanical name is Paphiopedilum but usually known as above. Flowers are

fine for corsages, 3½"-4" wide, white variously marked with green and purple veins and a brown purple lip. Blooms about Jan. to April, sometimes later. **C. insigne.** \$5.00 each. We will ship by parcel post out of pot or if wanted in pot will be sent by Express Collect.

Epidendrum o'brienanum. This orchid has a large terminal cluster of brilliant red flowers, each in the typical orchid form. The flowers open 10 or more at once and are about 1¼" wide. The plant makes a large cluster of tall stems, 3 ft. or more. Under good culture they flower all the time. They will grow well in full sun exposure; and abundance of water in summer. They grow easily in the garden in the south. In the north they are easy in pots or baskets. Small rooted plants 75c ea.

E. Hawaiian hybrids. Button-hole Orchids, white, orange, purple and yellow flowers as well as two-tone. Rooted cuttings. \$1.50 each. Assorted only.

Epiphronitis veitchii. A choice miniature orchid. Brilliant flowers, orange-red, blooms in very small sizes. Easy to grow. \$2.25.

Osmundine, best Florida grade. \$2.00 lb. postpaid.

Habenaria radiata. The Egret Flower. (At last! An orchid anyone can grow anywhere.) A deciduous terrestrial orchid from the orient that grows from small bulbs about the size of a bean. The glistening pure white flowers are held on stems twelve to fifteen inches high. Each stem carries two to five flowers one to two inches in diameter. The long green spurs add much to the attractiveness of the flowers. The feature of the flower is the fringed edge of the lip which gives the flower the appearance of a crane in flight. The individual flowers are long lasting and very pretty.

The plant is extremely hardy and will survive sub-zero weather, but will grow equally well in our southern climates or in a glass house. Packed moist, the bulbs will keep for many months in a refrigerator, and may be planted monthly in order to have flowers nearly all the year. It may be planted in almost any medium, such as garden soil, peat and sand mixture, orchid mixtures, sphagnum moss or leaf mould. If in moss it must be fed regularly, otherwise treat it like any other plant in your garden or house. The one most important cultural point is never to let it go dry. It must be kept moist at all times. We recommend six bulbs to a four inch pot. Order now but they will be delivered after or about November 1. We have the promise of these earlier. They will be sent just as soon as we receive them from Japan. 6 for \$1.50. \$2.50 doz.

THE GESNERIA FAMILY — Gesneriaceae

The Gesneriads listed here are tropical or semi-tropical. They are strictly house plants outside of the tropics. Most of them are for the warm house. All are either tuberous rooted and deciduous or fibrous rooted and evergreen.

Gloxinia Seed. We have a very good mixture of seed, 50c packet, 3 for \$1.25. Please send stamped addressed envelope for seed.

Seed Culture. Place fine grained vermiculite or terralite in the bottom of a plastic refrigerator dish 3" to 4" deep and moisten well. Plant seed very thinly over surface. Keep covered with lid until plants are ready to pick out. One must make sure that moisture does not escape and add water if it does. They may be picked out and transplanted into 2" pots after second pair of leaves develop. We also plant seed in 9" pans, half filled with peat and milled sphagnum. When planted cover pot with glass. We grow many rare seeds by either method, including African Violets. Gloxinias flower at about 5 months.

Episcia dianthiflora. This is a vigorous grower with small green leaves and white flowers with fringed petals in spring and summer. \$1.50 ea.

Columnneas. Are epiphytic climbing vines, having large, vivid red flowers. They may be grown in pots, soil similar to that of other Gesneriads, but we prefer to grow in wire baskets of pure sphagnum or with the center of sand and peat, equal parts.

Columnnea gloriosa. The most profuse bloomer. **C. Schiedeana,** very large, thick stems. **C. microphylla.** **C. Banksii.** **C. Allenii.** **Araguda.** \$1.25 new low price. One of each for \$7.00.

Aeschynanthus (*Trichosporum*). (Lipstick plant). This is a nice trailing, almost woody vine. In nature, they are epiphytal and climb trees. The plants are attractive and the freely produced large flowers are tubular and vividly colored.

They are tender tropicals and shipment will be made only when weather permits. We grow them in wire baskets, lined thickly with sphagnum and with peat and sand in center. They do well in pots. They require constant moisture. Leaves and flowers drop when dry.

Aeschynanthus lobbiana has scarlet fls. in a purple calyx. \$1.25 postpaid.

Rechsteineria cardinalis. Delightfully green slightly hairy, heart-shaped leaves, and long, curved flowers, borne in profusion, in the brightest of scarlet. Blooms resemble a Parrot's beak. May last longer than those of other gesneriads. Grow like Gloxinias with lots of light. 75c ea.

R. leucotricha. Brazilian Edelweiss. This new species may grow up to a very large bulb. Stems arise from the bulb and carry two or more flowers. The leaves are densely covered with white hair, and continue to grow for some time after the flowers are gone. \$1.25 each.

Achimenes available late December. 15 for \$1.00.

AFRICAN VIOLETS — Saintpaulias

Few would question the statement that African Violets are the most popular house plant at the present time. They fit perfectly into the modern smaller homes and rooms, where things are fixed or built in. Every convenience in a small space. They may be grown in an east, south, west or north window or even the basement if given artificial lighting and correct temperature. See under Garden Reference Books the new book, *Growing Plants Under Artificial Lights*.

They win favor because of their daintiness and beauty, their everblooming habit, their diversity in foliage, flower color and form. The introduction in 1955 of double pink varieties, for the first time have enhanced their popularity. There seems to be no limit to their possibilities in the hands of breeders, except that their color range can never include yellow or true spectrum red. The reds are always purple toned.

Culture. The question most often asked is, "How can I get constant bloom? My plants are healthy and grow luxuriantly. The foliage is deep rich green, beautiful plants but no flowers." The answer is, you do not give them enough light. Note the discussion under **Sun exposure**.

The advised **range of temperatures** for winter is 60° at night and 70° daytime. They might do a little better at 10° higher but that is uncomfortable for people in winter clothing and summer brings about 10° increase, in our living rooms.

The plants do not like sudden changes nor great changes. A nearly even temperature, within a limit of 12° between high and low is better. They are bound to have a greater range sometimes and if not more than about 15°, they are unlikely to lose their flowers. Loss of flowers is the first evidence of something wrong. This may result from sudden changes, drafts, too high a temperature in summer and in winter it may result if temperature goes much under 60° for more than an hour or two. Or it may result from too low relative humidity. This should be 40 to 60%.

African Violets grown at a congenial temperature are usually killed if subjected to lower than 40°. Therefore it is impossible for us to send you plants by mail in winter, to a cold climate. In favorable weather we can usually send to warmer sections of the south. Nor do we ship on very hot days in summer. We can ship leaves by air in winter but you must send extra for air mail.

Watering. Do not use cold water. The water should be near the room temperature and never over 10° lower or higher. Most of our watering is done by spraying with a hose. The plants need to have the foliage sprayed and it does not spot the foliage if no sun falls on the foliage before they dry off. The interval between waterings should be

long enough to permit the top soil to become slightly dry. Do not use pots that have no hole at bottom for drainage. Use sub-irrigation infrequently. We prefer regular pot watering.

Good ventilation is needed by all plants but Saintpaulias do not like drafts. Slow movement of air currents are more conducive to their comfort.

Soil formulae. Plants have a considerable tolerance and do well in a wide variety of soils. Soil should be at least mildly acid in reaction and a type that will drain easily and quickly. Heavy clay soils, therefore, are not good. We use about one half compost, one half peat with enough Sponge Rok to give good drainage.

If you are unable to supply your own soil mixture, the best we know about is Black Magic African Violet mix. Listed under "Supplies" in this catalog.

Fertilizers. We use only Spoonit and recommend it to be applied once a month, on a day following watering. See our listing under Garden Supplies.

Sun exposure. Most of the advice one receives over-emphasizes shade. Lack of sufficient light intensity is one of the most frequent causes of non-blooming. All shade plants need a certain amount of modified sunlight to make them flower. In the winter, the sun is at a low declination. Its rays must pass thru several times the thickness of atmosphere penetrated at noon in the summer when the sun is directly above or at "high declination." Very little shading is needed on the greenhouse in winter. Treated thus, our plants bloom profusely all winter. Very likely plants in a south window, anywhere in the north temperate zone, in winter, will be sufficiently shaded on the brightest days by a thin muslin curtain. It may not even be needed at all and on days of less than maximum intensity remove the shade.

But summer sun is much stronger. One must give more shade. It should not, however, be too heavy. The color of the foliage will tell you what they can endure. When healthy plants have light, yellowish foliage they probably receive too much sun. For checking, select a plant having green foliage, under normal conditions, not a dark foliage plant like Holly or Pink Delight nor one like Frosty having ivory or white areas.

If your Saintpaulias do not flower altho they grow well and appear to be healthy, you need to check on all points we have mentioned. Light intensity and duration are important. In the far north we have customers near the Arctic Circle where there is full daylight only in summer. Here the only possibility of winter flowers is the use of artificial light. They express interest in fluorescent lighting. Mrs. Rector, in *How To Grow African Violets* (which you should have—see our book list), says that an 80 watt fixture, 18" above the soil, has been found to give good growth and free flowering. Any kind of light will do provided the plants receive 15 to 30 foot candles (as measured by a photographic light meter) for 12 hours duration, daily. This should be tried in the Northern states where winter days are short and dull. For the most complete information on this, send us \$3.50 for Peggy Schulz' book, "Growing Plants Under Artificial Light."

Humidity. The humidity of our homes is likely to be not much over 25%. One can increase the humidity around the plant sufficiently by setting the plants in saucers. These may be partly filled with small gravel. Set pots on top of gravel and pour in water until it does not quite touch pots. A saturated sponge in a shallow dish will help humidify air. If you have a greenhouse, keep the walks wet.

Pests. Be sure to keep your plants free of insect pests. One of the most common on house plants is the **mealy bug**. Examine plants frequently for pests. Mealy bugs look like tiny specks of cotton. Use Isotox, used as a spray is effective. Badly infested plants should be discarded or at least removed from the vicinity of all other house plants. All effective insecticides are poisonous. You must not breathe the fumes. You must avoid skin contact. See listings.

Customers are invited to visit our nursery when in Los Angeles area. Drive east on Garvey, N. on Azusa, E. on Arrow Hwy. to Esther St., S. one block, or take La Verne Bus. Get off at Firey and walk west one block to Esther. Then south one block.

Orders from distant states, Hawaii, Alaska, Cuba, Europe, etc., should include enough for delivery by Air Parcel Post. We have shipped as far as Denmark, nearly 6,000 miles,

this way and plants arrived in perfect condition. They did not quit blooming. We charge the customer the excess of Air Parcel Post above the cost of Parcel Post to our 8th Postal Zone. Please state in your order that you will pay the difference promptly if your estimate is too low. But send your estimated amount with order.

Start leaf cuttings. A good many growers start cuttings in water. We believe a better way is to start in terralite (a fine grained form of vermiculite), keep moist and in good light but no sun. Long distance shipments should go by air, the same as for plants. If leaf is wilted, soak 2 hours in water or until leaves are fresh looking.

We have a number of new varieties to offer this spring both in plants and leaves. Some are in small quantity, so please give us a few substitutes or tell us we may substitute. We always send something just as good or better.

Sales Tax. Californians must include 4% Sales Tax. Out of state customers sending plants as presents to a California friend must also pay it. Please read "Terms and Instructions for Ordering," and comply on all points.

Please add 50c toward postage and packing. If wanted by Air Mail or Special Delivery you must pay for this. Estimate cost and promise you will send the difference if not enough.

For prices on plant stands, pots and other supplies for growing African Violets please see "Garden Supplies."

Alabaster. Double white. \$1.25.

Ann Bly. New. Huge bright pink star, heavy ruching. \$1.25.

Artists' Touch. New fall 1961. Large full deep purple double with painted white edge on bronze foliage. \$2.00.

Autumn Moon. Wavy leaves. Dark blue fringed double. \$1.25.

Blooming Fool. Very heavy flowering, medium blue double. \$1.25.

Blushing Beauty. Lovely white or cream single with pink edge. Wavy lvs. \$1.25.

Breathless. Large fringed raspberry rose dbl. Glossy dark wavy red backed fol. \$1.25.

Brandy Wine. Dark orchid double, white edge. \$1.25.

Charm Song. Charming light blue double, tailored foliage. \$1.00.

Chocolate Brownie. Dark wavy lvs. Tu-toned pink double with chocolate tips. \$1.00.

Cortez. New fall 1961 release. Giant full dbl. intense dark blue with golden eye on dark green tailored foliage. \$2.00.

Dapper Dandy. Dark quilted leaves. Medium blue double. \$1.00.

Delft Imperial. Fall 1961 release. Large full double, med. blue frilly flowers with white edge on bronze wavy foliage. \$2.00.

Delicate Affair. Lovely double pink. \$1.00.

Edena Minx. Double blue miniature, \$1.25. Our selection of other miniatures \$1.00 each.

Fancy Free. Peachy pink full cactus type double. \$1.00.

Fairy. Light double pink, ruffled, green edge. \$1.25.

Fairy Fringe. Wavy leaves. Pink and white fringed double, green edge. \$1.25.

Feathertop. Heavily frilled pink double. Lovely bronze foliage. \$1.25.

Fleet Dream. Large pink double. Plain leaves. \$1.00.

Frisly Blue Cindy. Dark wavy leaves. China blue double. \$1.00.

Fringed Nosegay. Fringed double soft pink, green edging. \$1.25.

Fire Dance. Very good red single. \$1.00.

Forever White. New 1961 Con. winner. A very profuse large single pure white blooms on dark green foliage. \$2.00.

Great Lakes. Quilted leaves. Very large blue violet single. \$1.00.

Hans Brinker. 1961 convention winner. Super giant deep blue bicolor with wide white edge. Dark green foliage. Blooms like mad. \$2.00.

Isle of Dream. Round, ruffled, hairy lvs. Fringed semi-double light pink to cerise flower. \$1.50.

Kings Ransom. 1961 release. Heaviest blooming single red to date. Good holding color, heavy clusters held well above dark green tailored foliage. \$2.00.

Legionnaire. Dark blue geneva type flowers. Excellent flowering. \$1.25.
Love's Dream. 1961 winner. Very pretty rich wine frilly bicolor single on dark bronzy wavy foliage. Very profuse bloomer. \$2.00.
Mint Popcorn. White double. Variegated foliage. \$1.25.
Mizz. Bright dbl. pink, green topped. Glossy wavy lvs. \$1.25.
Never Lovier. New. Brilliant deep wine bi-color full dbl. blooms with a wide white edge that never fades. Dark wavy bronze foliage. \$2.00.
Orchid Smoke. Black-green quilted wavy fuzzy lvs. Frilled semi-dbl. dusky orchid. \$1.25.

Pink Enchantress. Pink double, plain leaves. \$1.00.
Pink Fire. Double. Wavy dark leaves, deep pink fringed. \$1.50.
Pink Mist. Soft pink double free bronze foliage. \$1.25.
Pink Monarch. One of largest pink single flowers on girl foliage. \$1.00.
Princess Joan. Wavy supreme foliage. Large fringed single white. \$1.25.
Priscilla Landaker. Beautiful ruffled semi dbl. white. Girl foliage. \$1.25.
Putti Kat. Big deep reddish lavender star flowers. \$1.25.
Red Crown. Glowing wine-red, tailored foliage. \$1.25.
Red Lilac. Single lilac-blue, white eye lovely foliage and good. \$1.25.
Snow Ball. Good flowering double white. \$1.00.
Tea Time. Wavy leaves. Frilled single white slightly tinged pink. \$1.25.
Wedgewood. Luscious light blue dbl. excellent black-green fol. \$1.00.
Western Symphony. Large clusters of lavender-red semi double. \$1.25.
White Pride. Good flowering double. \$1.00.
White Sails. Quilted leaves. White single. \$1.25.
Wind N' Sea. Medium blue, with ruff dbl. \$1.25.
Wings of Eden. Waved serrated lvs. Dbl. blue and white. \$1.25.

We will send an extra violet for orders of \$10.00 or over. Two for \$20.00 orders. We will make selections if you wish.

Leaves, 50c each. \$5.00 doz. 25 for \$9.00. 50c for postage and packing. \$1.00 extra if wanted by air mail. If special delivery add 45c. Please give a few substitutes, if you do not, we will substitute with as good or better varieties if necessary. Dbl. means double, b blue, p pink, w white. Many new varieties in this list. We have a list of several hundred varieties for stamped and addressed large envelope or 10c.

Alabaster, dbl w	Cerama	Double Ruffled Queen
Alethia Martin, dbl	Cellini	Dresden Dancer
Alpine Crinkles	Chapel Boy	Edena Rose
Alpine Halo	Charm Song, dbl b	Elfin Dream, dbl
Arabia	Chartreuse Fringe	Fai Lee
Blackberry Fluff	Cheri Belle	Fairy, dbl, p & w
Black Cherry Supreme, dbl r	Cherry Wine	Fairy Fringe, dbl
Black Magic Supreme, dbl	Cinderella	Feathertop, dbl p
Black Pagoda	Claret	Flash, dbl p
Blue Le Fleur	Command Performance	Fleet Dream
Blue Modeste	D'Amour, r	Frathel's Debbie
Blue Rose	Deft Sweetheart	Frilly Blue Cluster, dbl b
Blushing, dbl, p & w	Delicate Afaire, dbl p	Fringed Nosegay, dbl p
Blushing Beauty	Devine Song	Fringed Orchid Rosette
Bonnie Girl	Dona Felisa	Fringed Raspberry
Brandy Wine	Dorothy Gray Supreme, dbl p	Gabriel
Breathless, dbl p	Dorothy Jean	Gay Ninety
Brides Waltz	Double Clarissa Harris	Gerri
Caravan Queen	Double Fringed Raspberry	Giant Ruffled, dbl
Caravan Pageant	Double Garnet Supreme	Good News Supreme, dbl p
Caravan Sultan	Double Pink Fire	Gold Lace
Cathy Ann	Double Pink Waverly	Green Dawn, dbl p

Green Years
 Illusion, w
 Impresario
 Indiana Jewel
 Isle of Dream
 Jack Frost, w
 Jasmine
 King of the Blue
 Lavender Doodad
 Lavender Shadows
 Lillian Jarrett
 Little Jewel Supreme, dbl p
 Livin' Doll, p
 Mauve Dip
 Merry Widow
 Mint Popcorn, dbl w
 Mizz, p
 My Sin
 My My
 Norah
 Orchid Premier
 Oranga
 Paris Pink

Peppermint Pink
 Pink Constellation, dbl
 Pink Drift
 Pink Holly
 Pink Jade, dbl
 Pixie Fire
 Pink Wings
 Play Boy Supreme
 Priscilla
 Priscilla Landanker, dbl w
 Princess Joan, w
 Purple Gown
 Putti Kat
 Racy Red
 Redderness
 Red Hart
 Red Lilac
 Red Sea
 ShriII
 Silver Moon Supreme, w
 Sin Purple
 Sir Echo
 Sister Alice

Smoky Ruffles
 Snowfall
 Snows of Kilimanjaro
 Spring Song
 Spun Velvet
 Star Frills
 Star Holly
 Star Light
 Susan, dbl b
 Swami
 Talisman
 Tea Rose, dbl
 Tea Time
 TV Vallin Pink
 Top Sales
 Western Symphony
 White Antoinette
 White Sales
 Wings of Eden
 Winter Green
 Wintry Rose
 Whiff
 Zorro

African Violet Leaves 35c ea. 3 for \$1.00. \$3.00/doz. Any over 12, 25c ea. 25/\$5.00. We give extras depending on size of order. We will be glad to make selections for you if you will give us price range, color, single or double.

Alaskan Waters, dbl b
 Angel Flake, dbl w
 Angel Lace
 Autumn Moon, dbl b
 Beau Kay, dbl r
 Blue Crepe, dbl b
 Blue Duet, b
 Blue Pom, dbl b
 Cathy Reed, p
 Centennial Sweetheart, p
 Cherry Ice
 China Doll
 Clarissa Harris, p
 Constanica
 Corrine, dbl w
 Cup of Claret, r
 Dorothy Gray, dbl p
 Dixie Moonbeam
 Dolly's Dream, dbl b
 Double Inspiration Sup.
 Dbl. Midnight
 Dbl. Red Comet
 Dbl. Uncle Bob, p
 Dbl. Snow Frills
 Ebb Tide
 Ember Pink Sup.
 Fancy Free, dbl p
 Fire Dance, r
 Fringed Pom Pom

Grotei Red Girl
 Good News, dbl p
 Her Grace
 High Noon, r
 Holly Halo
 Hollywood Ace, dbl b
 Hugonaut, dbl
 Improved Boyce Edens
 Iroquois, dbl p
 Kimberly
 Legionnaire
 Lilac Dale
 Lingo
 Little Giant Blue, dbl
 Little Giant Purple, dbl
 Love Knot, dbl p
 Love Song, b
 Mark Roberts
 Masquerade
 Matchmate
 May Melody, dbl b
 Melody Air, dbl p
 Miss Monroe, r
 Mr. Chicago, dbl b
 New Dawn, r
 Peach Chiffon, dbl
 Pink Grotei
 Pink Petticoats
 Pink Puff

Pink Vixen
 Prestige
 Pride of Rochester, dbl p
 Red Glow
 Rose Wing
 Santa Maria, b
 Sea Foam, dbl
 Senora Ramona
 Shag, dbl
 Show Cloud, dbl
 Show Day
 Show Stopper
 Silver Field, dbl
 Skywayman
 So. Sweet, dbl p
 Spic, dbl b
 Star Gazer
 Star Blue
 Sunbonnet Sue
 Torchy
 TV Beaumont Beauty
 TV Cut Velvet
 TV Play Boy
 TV Scandal
 TV Whispers
 Valor Blue
 Velvet Queen
 White Goddess
 Whiff, r

MISCELLANEOUS

Tecolote Ranunculus. Giant Double Camellia type blooms and huge brilliant Ruffled Doubles. 50c doz. \$3.75/100. We also have smaller bulbs at a special low price of \$2.20/100. For lots of flowers for picking or flowering in your garden plant several hundred. 500/\$9.00. **Anemone St. Brigid.** Large double and semi-double flowers. Mixture of brilliant hues and delicate shades of scarlet, rose, pink, lavender and blue. 60c doz. \$5.00/100. **Anemone Monarch de Caen.** Magnificent strain of single Poppy Anemone with immense flowers. Mixture 50c doz. 100/\$4.00.

Culture. Hardy only in deep south. It is best to start after summer heat has gone—in mild autumn weather. Don't forget to keep them moist. Transplant to garden in deep south or to pots in north. You can start them or grow them in a cool room in the house in winter. They should have sandy soil with peat added. Heat is their enemy.

Aphelandra Louisi. A new plant for the window garden or greenhouse. Deep green with white veins. Flowers are yellow. New and very popular. Small plants \$1.00 each.

Ceropegia. The following are vines having long trailing or twining stems. They may be grown in soil composed of loam, sand and leaf mould or peat, in pots or hanging baskets. Plant at once and keep only slightly moist until started. The flowers are very unusual. Prices are for small tubers or cuttings.

Ceropegia Woodi. Hearts on a String. Sweetheart vine. Rosary vine. Heart shaped leaves. The most desirable species. 50c.

C. debilis. Cylindrical leaves. Rapid grower. 35c.

C. Barkleyi. The oblong leaves are pointed at the apex. 60c.

Cacti and Succulents. 10 assorted Cacti or Succulents, \$2.00. 20, all different, \$3.25.

Epiphyllum. Orchid cactus. 75c cutting. Our selection.

Schlumbergera Gaertneri Giant. A larger growing form of the Easter Cactus, leaves up to five angled, may bloom most any time during the year. Large flowers. A must for your collection. \$1.50. **Rhipsalidopsis Rosea.** (Violet Beauty). One of the most heavenly plants when in flower. Very small joints, flowers violet rose the size of a quarter which at times may completely cover the plant. \$1.25. **Zygocactus** (Christmas Cactus) \$1.25 each. 5 varieties for \$5.75.

Heliconia species. Heliconias are sometimes grown in the greenhouse, or out-of-doors in warm regions for the foliage effects, making large clumps if given room. The plants thrive well in rich loam with plenty of water. They have large banana-like leaves. \$2.00.

Tree Peonies. Will bloom April and May the first year. True to name. All fully double. **Higurashi,** Red, **Yachiyo-Tsubaki,** pink, **Hanadaijin,** purple. \$2.75 ea. One of each \$7.75. **Kinko.** Fully double bright yellow, \$4.30. All are top quality, large 2 year old grafted plants. One each of the four \$10.75.

Tradescantia pexata. The leaves are densely covered with white hair. Flowers lavender. An interesting plant for your window or greenhouse. 50c ea.

Gingers. Culture. Plant in rich soil, provide light shade and plenty of water. They should never dry out while growing. They refuse to flower if kept too shaded. The flowers are produced in terminal heads and are very fragrant. Delivery any time.

Alpinia nutans. Shell ginger. Very tall growing evergreen ginger lily. The attractive flowers are produced at the top of the leafy stems. Flower spikes hang downward like a cluster of grapes. In bud it is white tipped pink. Open flowers exhibit orange and red inside. \$1.75.

Hedychium coronarium. Garland-flower. Floral bracts large and firm and closely imbricated, with 4 to 6 white very fragrant flowers. \$1.00.

H. flavum. Yellow Ginger. Much like Gardnerianum, tall grower. \$1.00.

H. gardnerianum. (Kahili Lily) Lvs. 1½ ft. long and 6 inches wide; fls. light yellow, with red stamens. Fragrant and a sure bloomer. \$1.00.

Kaempferia. The jewels of the Ginger Family of plants; They have extremely ornamental foliage and fugitive, bright and cheery flowers. Excellent subjects as house or

glasshouse plants. Pot in a rich, porous compost in four inch pots and treat like any other deciduous bulbous plant. Water and fertilize well when in active growth, but keep nearly dry when dormant. For best results report in fresh compost each winter.

Kaempferia galanga. Bright green oval leaves. The flowers are crystal white with purple eyes, and bloom in summer. Very dwarf. \$2.00.

K. involucrata. Light green oval leaves prominently ribbed. Lilac flowers in summer. \$1.50.

THE PINEAPPLE FAMILY — Bromeliaceae

Bromeliads include Billbergia, Aregelia, Aechmea, and many other genera.

Billbergias are most unusual and fascinating plants. Not only are the flowers in intriguing pastel shades but the floral display is made brilliant by the large vividly colored bracts that cover the scape. The leaves form a rosette and are more or less rigid. Some have brightly colored leaves and others are often mottled, striped or barred. All are desirable foliage plants.

In the outdoor garden they should have the same soil as recommended for pots. A few, like "nutans," will grow in nearly any soil but will do much better in the type recommended. They do well on the trunks of Palms.

They need about half shade. Too much sun will burn and finally destroy the foliage. Those species and varieties having highly colored foliage do not develop their rich colors when too deeply shaded. Most of our plants are grown in a well shaded Clivia house. When well established and growing, richer colors may be brought out by giving a little more sun than we do. **Culture** of Aechmea and Aregelia is the same.

Aechmea calyculata. The cones of bright yellow flowers are carried on thin stiff stems 18" high. Tubular rosettes of bright green foliage are about 15" high. \$1.50.

A. fasciata. The Urn Plant. Urn-shaped plant of green leaves banded white, powdery substance. Very attractive in foliage, but the flower, which lasts for months, is even more so. It flowers July to August with pyramidal shaped heads of pink bracts from which emerge numerous flowers colored French blue at first, turning to violet and then to deep rose. \$8.50.

A. Foster's Favorite. An outstanding hybrid nearly identical with Aechmea recinae, but instead of the foliage being green, it is a bright shade of glossy red. The drooping flower stem is very long. \$4.00 each.

A. mariae-reginae. Robust rosette of broad, gray-green, leathery leaves, recurved and with toothed edge; stout spike with pendant, delicate pink bract-leaves, topped by cylindrical head of red-tipped berries and violet flowers. \$7.50.

A. ortgiesii. A very useful dwarf plant with rosettes of recurved serrated leaves looking more like a Dyckia than an Aechmea. The deep lavender flowers are carried on a brilliant red cone in the center of the leaves which also become red occasionally while the plant is in bloom. \$5.00.

A. pineliana. Attractive, wide open rosettes of foliage toothed with dark spines, and colored soft shades of rose, copper, gray and green. The stem is covered with red bracts and topped by a small head of yellow flowers. The berries last a long time in color. \$3.00 each.

A. tillandsoides. Foliage resembles Billbergias. 1 foot high, red bracts. Flowers yellow followed by turquoise. \$5.00.

A. Weibachii. Attractive rosette of oblanceolate coppery-green leaves wine red beneath, and spined; inflorescence on panicle with glowing crimson bracts and orchid-colored ovaries and flowers. \$4.00.

Billbergia Burkholtzi. Tall, slender, erect green leaves. Rose bracts, lavender fls. \$2.00.

B. distachia. Long, reddish green lvs., spotted cream. Rose bracts, blue and green fls. 75c.

B. Elvenia Slosson (Nutans x Alberti). Tall plant with very attractive flowers in spring. It takes a lot of postage and its fine quality makes it cost \$3.00 each.

B. nutans. Mid-winter, beautiful inflorescence on small plants. Fine pot plants. 75c.
B. pyramidalis. Wide green lvs. Red fls. tipped violet, red bracts. \$2.00.
B. Rubro-cyanea. Most colorful foliage, red and green spotted cream. Green fls. edged blue. Crimson bracts. \$1.00.

B. speciosa. Green lvs., striped on back. Green fls., tipped blue. Rose bracts. \$2.00.

B. Theodore L. Meade. Green lvs. and large, beautiful inflorescence, continuous all year on new growths. \$1.50.

B. thyrsoidea. Forms very large, wide open rosettes of leaves. It blooms in August with a large flat head of rosy flowers held erect on a stem covered with deep rose bracts. It is commonly known as Torch Billbergia, and is really worth having. \$3.00.

B. thrysiflora (pyramidalis x amoena). Finest hybrid. Beautiful inflorescence. \$1.50.

B. Zebrina. Lvs. banded white on back. Salmon bracts, green fls. \$1.50.

Cryptbergia Media. A bigeneric bromeliad hybrid of Billbergia and Cryptanthus. The flowers are very insignificant, but foliage is lovely, being of pinkish and bronzy tints especially when given plenty of light. Highly recommended for the window garden. \$1.00 ea.

Cryptanthus Bromeloides, var. Tricolor. One of the most colorful of the Cryptanthus. The leaves are variegated white and green, and in strong light it is stained pink and red, assuming a most charming color effect. The amount of color stain varies in direct proportion with the amount of light. \$2.50.

Guzmania minor. (Lingulata). Delicate green, very thin leaves, most brilliant red center during flowering. \$7.50.

Neoregelia caroliniae (marechalii). Wide leaves which take on a rosy red coloring \$7.50.

Neoregelia spectabilis. Called "Fingernail plant" because of the red tips of the metallic olive green leaves; gray crossbands beneath; blue flowers in low cushion. \$3.50.

Big 4 collection. Nutans, Distachia, Rubro-cyanea and Zebrina. Value \$3.50. Price \$3.25. We will send larger plants if you order them to come by express, f.o.b.

Tillandsia ionantha. A miniature plant of xerophytic habit. It is strictly an air plant and does not have to be planted except for convenience. In nature it grows on tree bark, rock or telegraph wire. The best method of handling is to plant in a very small pot of sphumunda and set in full sunlight. Water the leaves occasionally. The two inch rough leaves are crowded together urn-shaped. When in flower the leaves turn red. The flowers are very large for the size of the plant, tubular in form and purple in color with yellow anthers at the tip. This is one of the finest plants we know of for a small sunny window garden. \$1.50.

Tillandsia lindenii. Gracefully curved pointed leaves with maroon lines deepening towards the base. The flattened ten inch flower spike is light pink with large blue flowers emerging alternately from the sides. Very long lasting. Some consider this the finest of all bromeliads. \$7.50 ea.

Quesnelia arvensis. This is a terrestrial plant and should be grown in the ground or a sandy soil mixture with peat added, if potted. The leaves are large and spiny. The bloom is erect, a brilliant shade of pink in a large closely packed umbel. Should be grown in open sunlight. Rare. \$5.00.

Q. liboniana. Light green foliage that is rather stiff in form. The flowers are stunningly different, being a combination of deep orange and blackish purple. \$1.50 ea.

Vriesia marie. "Painted Feather," hybrid larger than carinata, light green foliage tinted pink and showy, flattened, featherlike spike with bracts salmon-rose at base, and yellow dotted brown toward apex; yellow flowers. \$7.00.

V. carinata. A small growing plant with about six-inch spread, plain green shiny leaves. Red, yellow and green colors on a fan-like structure on end of a ten-inch stem. The color lasts a long time. Summer blooming. \$7.50.

V. splendens. Flaming Sword. A beautiful green plant with mahogany stripes. Flower spike tall, flat, and brilliant orange. Spectacular. Rare. Plant does not sucker like other Bromeliads but makes new plants in its own center. Small \$5.00.